

REMARKS

Reconsideration and allowance of the present patent application based on the following remarks are respectfully requested.

By this Amendment, claims 1, 4 and 7 are amended without any intention of narrowing the scope of any of the claims. Support for the amendments to the claims may be found throughout the original description. No new matter has been added. Accordingly, after entry of this Amendment, claims 1-10 will be pending in the patent application.

As a preliminary matter, Applicant notes that claim 4 has not been objected to, nor rejected, by the Office Action. Accordingly, Applicant assumes that this claim is in condition for allowance. In the event that claim 4 is not allowed in the next communication from the Office, Applicant respectfully submits that a new, non-final Office Action must be issued setting a new period for reply. (See MPEP § 706.07 and 37 C.F.R. § 1.113).

Claims 1-3 and 5 were rejected under 35 U.S.C. § 103(a) based on Freige *et al.* (U.S. Patent No. 5,297,000) (hereinafter “Freige”) in view of Fehlhaber (U.S. Patent No. 6,314,481). The rejection is respectfully traversed.

Claim 1 recites a network bus coupler mountable on a circuit card, the network bus coupler comprising: a housing; electrical isolation circuitry disposed within the housing; and, connectors disposed exterior of the housing and electrically coupled to the electrical isolation circuitry, the connectors configured to be coupled to the circuit card.

By way of review, Freige discloses a desktop that includes a control unit CB (identified by the Office Action as the “housing” of claim 1), a monitor M and a keyboard KB. (See, e.g., col. 2, lines 42-61 and FIGS. 1 and 6 of Freige). The control unit CB includes a base structure 7 on which are mounted a power unit 20, a disk drive array 10 and various card packages 30 plugged onto the motherboard. *Id.* Communication cables to the control unit CB are plugged onto 25-pin D-type connectors (identified by the Office Action as the “connectors” of claim 1). (See, e.g., col. 4, lines 5-9 and FIG. 6 of Freige).

The Office Action concedes (*see* page 2 of the Office Action) that Freige fails to disclose, teach or suggest an isolation circuitry within the housing. However, there are additional features that are absent in Freige.

For example, unlike claim 1, Freige does not disclose, teach or suggest connectors disposed exterior of the housing and electrically coupled to the electrical isolation circuitry, the connectors configured to be coupled to the circuit card. Freige merely discloses that the 25-pin D-type connectors are adapted to be coupled to communication cables, not to a circuit

card, as required in claim 1. As another example, Freige does not disclose, teach or suggest that the control unit CB is mountable on a circuit card, as also required in claim 1.

Fehlhaber fails to remedy the deficiencies of Freige. Fehlhaber merely discloses a data bus coupler 120 that couples a bus 32 to a remote terminal RT. (*See, e.g.*, FIGS. 1 and 2 of Fehlhaber). The bus coupler 120 includes a coupling transformer 24, 124 connected to stubs 42, 142 of the remote terminal RT. (*See, e.g.*, FIGS. 1 and 2 of Fehlhaber). However, Fehlhaber fails to disclose, teach or suggest connectors disposed exterior of the housing and electrically coupled to the electrical isolation circuitry, the connectors configured to be coupled to the circuit card, as required in claim 1. Applicant notes that Fehlhaber's data bus coupler is well known in the art and is discussed, for example, in paragraphs 4-7 of the present patent application. Thus, any proper combination of Freige and Fehlhaber cannot result, in any way, in the invention of claim 1.

Equally important is the fact that one of ordinary skill in the art would not combine the desktop of Freige with the bus coupler 120 of Fehlhaber.

As an initial matter, Freige does not disclose that its desktop arrangement suffers from short circuits. Thus, it is not clear as to why one of ordinary skill in the art would combine Freige and Fehlhaber.

More importantly, Freige's control unit CB is in no way configured to be embedded in an airplane. Freige's control unit CB merely relates to a conventional desktop. As such, Freige is directed to a completely different field of endeavor and is non-analogous art.

Moreover, the Examiner has not provided the requisite analysis as to why one of ordinary skill in the art would combine the elements of Freige and Fehlhaber in the manner that the Examiner has proposed. *See KSR Int'l. Co. v. Teleflex, Inc.*, No. 04-1350, slip opinion at page 14 (U.S. Apr. 30, 2007) (a determination must be made as to "whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue. To facilitate review, this analysis should be made explicit"). Instead, the Examiner has only offered a conclusory statement that it would have been obvious to add the isolation transformers of Fehlhaber to the housing of Freige "because according to Fehlhaber, it is a requirement of MIL-STD-1533." (*See* page 2 of the Office Action). This is clearly inadequate under the Supreme Court's *KSR* decision. As noted above, Freige's device merely relates to a desktop, not to a device that is configured to be embedded in an airplane. As such, the features of Freige's control unit are in no way governed by Mil. Std. 1553, nor has Freige hinted at such a possibility. Thus, one of ordinary skill in the art would not be motivated to modify Freige's control unit CB to incorporate the isolation transformers of

Fehlhaber in the manner proposed by the Examiner. For at least this reason, the combination of Freige and Fehlhaber fails to present a *prima facie* case of obviousness.

Claims 2-3 and 5 are patentable over Freige, Fehlhaber and a combination thereof at least by virtue of their dependency from claim 1 and for the additional features recited therein.

Accordingly, reconsideration and withdrawal of claims 1-3 and 5 under 35 U.S.C. § 103(a) based on Freige in view of Fehlhaber are respectfully requested.

Claim 6 was rejected under 35 U.S.C. § 103(a) based on Freige in view of Fehlhaber and Shaffer (U.S. Patent No. 5,841,778). The rejection is respectfully traversed.

Claim 6 is patentable over Freige, Fehlhaber and a combination thereof at least by virtue of its dependency from claim 1 and for the additional features recited therein.

Shaffer fails to remedy the deficiencies of Freige and Fehlhaber. For example, Shaffer fails to disclose, teach or suggest connectors disposed exterior of the housing and electrically coupled to the electrical isolation circuitry, the connectors configured to be coupled to the circuit card, as required in claim 6. Shaffer merely relates to a system for controlling traffic on a local area network. Thus, any proper combination of Freige and Fehlhaber cannot result in any way in the invention of claim 6.

Furthermore, Applicant strenuously disagrees with the Examiner's determination that Shaffer discloses a bus terminator disposed in the housing and electrically coupled to a connection disposed exterior of the housing. What Shaffer does disclose are two terminators 110, 160 that are located at opposite sides of a network bus 170. (*See* FIG. 1 of Shaffer). However, there are no teachings or suggestions in Shaffer, nor in any of the cited references, that terminators 110, 160 should be disposed inside of the housing of a network bus coupler and electrically coupled to a connector exterior of the housing, as required in claim 6. The Examiner has manifestly ignored the language of claim 6 on its face. In particular, even assuming, *arguendo*, that it would have been obvious to combine the teachings of Freige, Fehlhaber and Shaffer, such a combination would have merely led one of ordinary skill in the art to provide terminators to opposite ends of a bus network connected to the control unit CB of Freige, as disclosed in Shaffer. However, this is not the invention of claim 6.

Furthermore, and as noted above, it is respectfully submitted that one of ordinary skill in the art would not have combined the teachings of Freige and Fehlhaber. Thus, the combination of Freige, Fehlhaber and Shaffer fails to present a *prima facie* case of obviousness.

Accordingly, reconsideration and withdrawal of the rejection of claim 6 under 35 U.S.C. § 103(a) based on Freige in view of Fehlhaber and Shaffer are respectfully requested.

Claims 7, 8 and 10 were rejected under 35 U.S.C. § 103(a) based on Rudy *et al.* (U.S. Patent No. 5,348,482) (hereinafter “Rudy”) in view of Fehlhaber. The rejection is respectfully traversed.

Claim 7 recites a system for coupling a device to a bus, said system comprising: a junction box electrically coupled to said device and to said bus; a circuit card disposed in said junction box, said circuit card including a plurality of sockets; and, a modular network bus coupler mountable to said circuit card, said bus coupler comprising: a housing; electrical isolation circuitry disposed within the housing; and, a plurality of pins disposed exterior of the housing and engageable with at least some of said sockets of said circuit card, at least some of said pins being electrically coupled to said electrical isolation circuitry.

By way of review, Rudy discloses a junction box 10 that includes circuit cards and a back plane assembly 200 having a rear wall 14. A plurality of connectors 208 (identified by the Office Action as the “plurality of pins” of claim 7) are disposed on the rear wall 14. (*See, e.g.*, FIGS. 1-5 of Rudy).

The Examiner concedes that Rudy does not disclose, teach or suggest an isolation circuitry but asserts that it would have been obvious to add the isolation circuitry disclosed by Fehlhaber into the junction box of Rudy. (*See* page 3 of the Office Action). Applicant strenuously disagrees and submits that there is nothing in Rudy, Fehlhaber and a combination thereof that discloses, teaches or suggests each and every feature recited in claim 7.

For example, the Office Action argues that the plurality of pins shown in FIG. 5 of Rudy are “inherently engageable with some of the sockets.” (*See* page 3 of the Office Action). Respectfully, this is incorrect. “In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristics necessarily flow from the teachings of the applied prior art.” (*See* MPEP § 2112 citing Ex Parte Levy, 17 U.S.P.Q. 2d 1461, 1464 (Bd. Pat. App. & Inter. 1990)). There are no teachings or suggestions in the cited portions of Rudy that would lead one to conclude that the connectors 208 are connected to the sockets of a circuit card, as required in claim 7. Quite to the contrary, Rudy clearly discloses that the connectors 208 are connected to the connectors 350 on frame member 310. (*See, e.g.*, col. 9, lines 62-67 and FIGS. 6-7 of Rudy). Thus, the Examiner’s determination that the connectors 208 of Rudy are “inherently engageable with some of the sockets” of the circuit card is simply incorrect.

Moreover, even assuming *arguendo* that it would have been obvious to add the bus coupler 20, 120 including coupling transformer 24, 124 of Fehlhaber into the back plane assembly 200 of Rudy (identified by the Office Action as the “modular bus coupler” of claim 7), there is no indication or reason as to why one of ordinary skill in the art would couple some of the plurality of connectors of the back plane assembly 200 to the electrical isolation circuitry in the manner recited in claim 7. The mere fact that MIL-STD-1553B specifies that internal fault isolation resistors be placed in series with a step up transformer to provide for protection to the main data bus, in and of itself, does not lead one to conclude that such isolation circuitry has to be provided in the manner recited in claim 7, that is, coupled to pins that engage the socket of a circuit card. In support of this, Fehlhaber fails to disclose, teach or suggest the use of a circuit card. What Fehlhaber does disclose is that the coupling transformers 24, 124 are connected to the stubs 42, 142 of a device. Accordingly, if one were to modify the back plane assembly 200 of Rudy in view of Fehlhaber, one would merely end-up with the coupling transformers 24, 124 arranged between the connectors 208 and 350 of Rudy. However, this is not the invention of claim 7.

For at least these reasons, it is respectfully submitted that the combination of Rudy and Fehlhaber fails to present a *prima facie* case of obviousness.

Claims 8 and 10 are patentable over Rudy, Fehlhaber and a combination thereof at least by virtue of their dependency from claim 7 and for the additional features recited therein.

Accordingly, reconsideration and withdrawal of the rejection of claims 7, 8 and 10 under 35 U.S.C. § 103(a) based on Rudy in view of Fehlhaber are respectfully requested.

Claim 9 was rejected under 35 U.S.C. § 103(a) based on Rudy, Fehlhaber and Schaffer. The rejection is respectfully traversed.

Claim 9 is patentable over Rudy, Fehlhaber, Schaffer and a combination thereof at least by virtue of its dependency from claim 7 and for the additional features recited therein. Specifically, for at least similar reasons as provided above for claim 7, it is respectfully submitted that none of the cited references disclose, teach or suggest a system for coupling a device to a bus, said system comprising: a junction box electrically coupled to said device and to said bus; a circuit card disposed in said junction box, said circuit card including a plurality of sockets; and a modular network bus coupler mountable to said circuit card, said bus coupler comprising: a housing; electrical isolation circuitry disposed within the housing; and, a plurality of pins disposed exterior of the housing and engageable with at least some of

said sockets of said circuit card, at least some of said pins being electrically coupled to said electrical isolation circuitry.

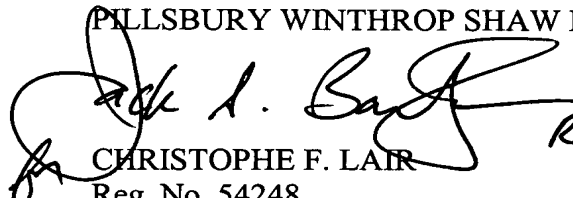
Accordingly, reconsideration and withdrawal of the rejection of claim 9 under 35 U.S.C. § 103(a) based on Rudy, Fehlhaber and Schaffer are respectfully requested.

All objections and rejections having been addressed, it is respectfully submitted that the present application is in a condition for allowance and a Notice to that effect is earnestly solicited. If any point remains at issue which the Examiner feels may best be resolved through a personal or telephone interview, please contact the undersigned at the telephone number below.

Please charge any fees associated with the submission of this paper to Deposit Account Number 033975. The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

Respectfully submitted,

PILLSBURY WINTHROP SHAW PITTMAN LLP

  
CHRISTOPHE F. LAIR  
Reg. No. 54248  
Tel. No. 703.770.7797  
Fax No. 703.770.7901

Reg 37,087

JSB/CFL/smm  
P.O. Box 10500  
McLean, VA 22102  
(703) 770-7900